

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/553,904
Source: IFWP
Date Processed by STIC: 3/8/07

ENTERED



IFWP

RAW SEQUENCE LISTING

DATE: 03/08/2007

PATENT APPLICATION: US/10/553,904

TIME: 12:25:22

Input Set : A:\53694131.APP

Output Set: N:\CRF4\03082007\J553904.raw

```

3 <110> APPLICANT: BJORCK, LARS
4     HERWALD, HEIKO
5     MORGELIN, MATTHIAS
6     RUSSELL, WAYNE
7     NORRBY-TEGLUND, ANNA
8     LINDBOM, LENNART
9     SOLLENBERG, ULLA
10    CRAMER, HENNING
11    FLODGAARD, HANS
13 <120> TITLE OF INVENTION: METHOD FOR IDENTIFYING AN ANTI-STREPTOCOCCAL AGENT AND
14    ITS USE FOR TREATING STREPTOCOCCAL INFECTIONS
16 <130> FILE REFERENCE: 053694-0131
18 <140> CURRENT APPLICATION NUMBER: 10/553,904
19 <141> CURRENT FILING DATE: 2005-10-21
21 <150> PRIOR APPLICATION NUMBER: PCT/EP04/004429
22 <151> PRIOR FILING DATE: 2004-04-23
24 <150> PRIOR APPLICATION NUMBER: GB 0309246.7
25 <151> PRIOR FILING DATE: 2003-04-23
27 <150> PRIOR APPLICATION NUMBER: GB 0329112.7
28 <151> PRIOR FILING DATE: 2003-12-16
30 <160> NUMBER OF SEQ ID NOS: 11
32 <170> SOFTWARE: PatentIn Ver. 3.3
34 <210> SEQ ID NO: 1
35 <211> LENGTH: 484
36 <212> TYPE: PRT
37 <213> ORGANISM: Streptococcus pyogenes
39 <400> SEQUENCE: 1
40 Met Ala Lys Asn Asn Thr Asn Arg His Tyr Ser Leu Arg Lys Leu Lys
41   1           5           10           15
43 Thr Gly Thr Ala Ser Val Ala Val Ala Leu Thr Val Leu Gly Ala Gly
44           20           25           30
46 Phe Ala Asn Gln Thr Glu Val Lys Ala Asn Gly Asp Gly Asn Pro Arg
47           35           40           45
49 Glu Val Ile Glu Asp Leu Ala Ala Asn Asn Pro Ala Ile Gln Asn Ile
50   50           55           60
52 Arg Leu Arg Tyr Glu Asn Lys Asp Leu Lys Ala Arg Leu Glu Asn Ala
53   65           70           75           80
55 Met Glu Val Ala Gly Arg Asp Phe Lys Arg Ala Glu Glu Leu Glu Lys
56           85           90           95
58 Ala Lys Gln Ala Leu Glu Asp Gln Arg Lys Asp Leu Glu Thr Lys Leu
59           100          105          110
61 Lys Glu Leu Gln Gln Asp Tyr Asp Leu Ala Lys Glu Ser Thr Ser Trp
62           115          120          125

```

RAW SEQUENCE LISTING

DATE: 03/08/2007

PATENT APPLICATION: US/10/553,904

TIME: 12:25:22

Input Set : A:\53694131.APP

Output Set: N:\CRF4\03082007\J553904.raw

```

64 Asp Arg Gln Arg Leu Glu Lys Glu Leu Glu Glu Lys Lys Glu Ala Leu
65      130              135              140
67 Glu Leu Ala Ile Asp Gln Ala Ser Arg Asp Tyr His Arg Ala Thr Ala
68 145              150              155              160
70 Leu Glu Lys Glu Leu Glu Glu Lys Lys Lys Ala Leu Glu Leu Ala Ile
71              165              170              175
73 Asp Gln Ala Ser Gln Asp Tyr Asn Arg Ala Asn Val Leu Glu Lys Glu
74              180              185              190
76 Leu Glu Thr Ile Thr Arg Glu Gln Glu Ile Asn Arg Asn Leu Leu Gly
77      195              200              205
79 Asn Ala Lys Leu Glu Leu Asp Gln Leu Ser Ser Glu Lys Glu Gln Leu
80      210              215              220
82 Thr Ile Glu Lys Ala Lys Leu Glu Glu Glu Lys Gln Ile Ser Asp Ala
83 225              230              235              240
85 Ser Arg Gln Ser Leu Arg Arg Asp Leu Asp Ala Ser Arg Glu Ala Lys
86              245              250              255
88 Lys Gln Val Glu Lys Asp Leu Ala Asn Leu Thr Ala Glu Leu Asp Lys
89              260              265              270
91 Val Lys Glu Asp Lys Gln Ile Ser Asp Ala Ser Arg Gln Gly Leu Arg
92              275              280              285
94 Arg Asp Leu Asp Ala Ser Arg Glu Ala Lys Lys Gln Val Glu Lys Asp
95      290              295              300
97 Leu Ala Asn Leu Thr Ala Glu Leu Asp Lys Val Lys Glu Glu Lys Gln
98 305              310              315              320
100 Ile Ser Asp Ala Ser Arg Gln Gly Leu Arg Arg Asp Leu Asp Ala Ser
101              325              330              335
103 Arg Glu Ala Lys Lys Gln Val Glu Lys Ala Leu Glu Glu Ala Asn Ser
104              340              345              350
106 Lys Leu Ala Ala Leu Glu Lys Leu Asn Lys Glu Leu Glu Glu Ser Lys
107              355              360              365
109 Lys Leu Thr Glu Lys Glu Lys Ala Glu Leu Gln Ala Lys Leu Glu Ala
110      370              375              380
112 Glu Ala Lys Ala Leu Lys Glu Gln Leu Ala Lys Gln Ala Glu Glu Leu
113 385              390              395              400
115 Ala Lys Leu Arg Ala Gly Lys Ala Ser Asp Ser Gln Thr Pro Asp Thr
116              405              410              415
118 Lys Pro Gly Asn Lys Ala Val Pro Gly Lys Gly Gln Ala Pro Gln Ala
119              420              425              430
121 Gly Thr Lys Pro Asn Gln Asn Lys Ala Pro Met Lys Glu Thr Lys Arg
122              435              440              445
124 Gln Leu Pro Ser Thr Gly Glu Thr Ala Asn Pro Phe Phe Thr Ala Ala
125      450              455              460
127 Ala Leu Thr Val Met Ala Thr Ala Gly Val Ala Ala Val Val Lys Arg
128 465              470              475              480
130 Lys Glu Glu Asn
134 <210> SEQ ID NO: 2
135 <211> LENGTH: 4
136 <212> TYPE: PRT
137 <213> ORGANISM: Artificial Sequence

```

RAW SEQUENCE LISTING

DATE: 03/08/2007

PATENT APPLICATION: US/10/553,904

TIME: 12:25:22

Input Set : A:\53694131.APP

Output Set: N:\CRF4\03082007\J553904.raw

```

139 <220> FEATURE:
140 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
141     peptide
143 <400> SEQUENCE: 2
144 Gly Pro Arg Pro
145     1
148 <210> SEQ ID NO: 3
149 <211> LENGTH: 4
150 <212> TYPE: PRT
151 <213> ORGANISM: Artificial Sequence
153 <220> FEATURE:
154 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
155     peptide
157 <400> SEQUENCE: 3
158 Gly His Arg Pro
159     1
162 <210> SEQ ID NO: 4
163 <211> LENGTH: 13
164 <212> TYPE: DNA
165 <213> ORGANISM: Artificial Sequence
167 <220> FEATURE:
168 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
169     primer
171 <400> SEQUENCE: 4
172 ggggttggtga gaa
175 <210> SEQ ID NO: 5
176 <211> LENGTH: 644
177 <212> TYPE: PRT
178 <213> ORGANISM: Homo sapiens
180 <400> SEQUENCE: 5
181 Met Phe Ser Met Arg Ile Val Cys Leu Val Leu Ser Val Val Gly Thr
182     1             5             10             15
184 Ala Trp Thr Ala Asp Ser Gly Glu Gly Asp Phe Leu Ala Glu Gly Gly
185             20             25             30
187 Gly Val Arg Gly Pro Arg Val Val Glu Arg His Gln Ser Ala Cys Lys
188             35             40             45
190 Asp Ser Asp Trp Pro Phe Cys Ser Asp Glu Asp Trp Asn Tyr Lys Cys
191             50             55             60
193 Pro Ser Gly Cys Arg Met Lys Gly Leu Ile Asp Glu Val Asn Gln Asp
194     65             70             75             80
196 Phe Thr Asn Arg Ile Asn Lys Leu Lys Asn Ser Leu Phe Glu Tyr Gln
197             85             90             95
199 Lys Asn Asn Lys Asp Ser His Ser Leu Thr Thr Asn Ile Met Glu Ile
200             100            105            110
202 Leu Arg Gly Asp Phe Ser Ser Ala Asn Asn Arg Asp Asn Thr Tyr Asn
203             115            120            125
205 Arg Val Ser Glu Asp Leu Arg Ser Arg Ile Glu Val Leu Lys Arg Lys
206             130            135            140
208 Val Ile Glu Lys Val Gln His Ile Gln Leu Leu Gln Lys Asn Val Arg

```

13

RAW SEQUENCE LISTING

DATE: 03/08/2007

PATENT APPLICATION: US/10/553,904

TIME: 12:25:22

Input Set : A:\53694131.APP

Output Set: N:\CRF4\03082007\J553904.raw

```

209 145          150          155          160
211 Ala Gln Leu Val Asp Met Lys Arg Leu Glu Val Asp Ile Asp Ile Lys
212          165          170          175
214 Ile Arg Ser Cys Arg Gly Ser Cys Ser Arg Ala Leu Ala Arg Glu Val
215          180          185          190
217 Asp Leu Lys Asp Tyr Glu Asp Gln Gln Lys Gln Leu Glu Gln Val Ile
218          195          200          205
220 Ala Lys Asp Leu Leu Pro Ser Arg Asp Arg Gln His Leu Pro Leu Ile
221          210          215          220
223 Lys Met Lys Pro Val Pro Asp Leu Val Pro Gly Asn Phe Lys Ser Gln
224 225          230          235          240
226 Leu Gln Lys Val Pro Glu Trp Lys Ala Leu Thr Asp Met Pro Gln
227          245          250          255
229 Met Arg Met Glu Leu Glu Arg Pro Gly Asn Glu Ile Thr Arg Gly
230          260          265          270
232 Gly Ser Thr Ser Tyr Gly Thr Gly Ser Glu Thr Glu Ser Pro Arg Asn
233          275          280          285
235 Pro Ser Ser Ala Gly Ser Trp Asn Ser Gly Ser Ser Gly Pro Gly Ser
236          290          295          300
238 Thr Gly Asn Arg Asn Pro Gly Ser Ser Gly Thr Gly Gly Thr Ala Thr
239 305          310          315          320
241 Trp Lys Pro Gly Ser Ser Gly Pro Gly Ser Thr Gly Ser Trp Asn Ser
242          325          330          335
244 Gly Ser Ser Gly Thr Gly Ser Thr Gly Asn Gln Asn Pro Gly Ser Pro
245          340          345          350
247 Arg Pro Gly Ser Thr Gly Thr Trp Asn Pro Gly Ser Ser Glu Arg Gly
248          355          360          365
250 Ser Ala Gly His Trp Thr Ser Glu Ser Ser Val Ser Gly Ser Thr Gly
251          370          375          380
253 Gln Trp His Ser Glu Ser Gly Ser Phe Arg Pro Asp Ser Pro Gly Ser
254 385          390          395          400
256 Gly Asn Ala Arg Pro Asn Asn Pro Asp Trp Gly Thr Phe Glu Glu Val
257          405          410          415
259 Ser Gly Asn Val Ser Pro Gly Thr Arg Arg Glu Tyr His Thr Glu Lys
260          420          425          430
262 Leu Val Thr Ser Lys Gly Asp Lys Glu Leu Arg Thr Gly Lys Glu Lys
263          435          440          445
265 Val Thr Ser Gly Ser Thr Thr Thr Thr Arg Arg Ser Cys Ser Lys Thr
266          450          455          460
268 Val Thr Lys Thr Val Ile Gly Pro Asp Gly His Lys Glu Val Thr Lys
269 465          470          475          480
271 Glu Val Val Thr Ser Glu Asp Gly Ser Asp Cys Pro Glu Ala Met Asp
272          485          490          495
274 Leu Gly Thr Leu Ser Gly Ile Gly Thr Leu Asp Gly Phe Arg His Arg
275          500          505          510
277 His Pro Asp Glu Ala Ala Phe Phe Asp Thr Ala Ser Thr Gly Lys Thr
278          515          520          525
280 Phe Pro Gly Phe Phe Ser Pro Met Leu Gly Glu Phe Val Ser Glu Thr
281          530          535          540

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/553,904

DATE: 03/08/2007

TIME: 12:25:22

Input Set : A:\53694131.APP

Output Set: N:\CRF4\03082007\J553904.raw

```

283 Glu Ser Arg Gly Ser Glu Ser Gly Ile Phe Thr Asn Thr Lys Glu Ser
284 545                               550                               555                               560
286 Ser Ser His His Pro Gly Ile Ala Glu Phe Pro Ser Arg Gly Lys Ser
287                               565                               570                               575
289 Ser Ser Tyr Ser Lys Gln Phe Thr Ser Ser Thr Ser Tyr Asn Arg Gly
290                               580                               585                               590
292 Asp Ser Thr Phe Glu Ser Lys Ser Tyr Lys Met Ala Asp Glu Ala Gly
293                               595                               600                               605
295 Ser Glu Ala Asp His Glu Gly Thr His Ser Thr Lys Arg Gly His Ala
296 610                               615                               620
298 Lys Ser Arg Pro Val Arg Gly Ile His Thr Ser Pro Leu Gly Lys Pro
299 625                               630                               635                               640
301 Ser Leu Ser Pro
305 <210> SEQ ID NO: 6
306 <211> LENGTH: 491
307 <212> TYPE: PRT
308 <213> ORGANISM: Homo sapiens
310 <400> SEQUENCE: 6
311 Met Lys Arg Met Val Ser Trp Ser Phe His Lys Leu Lys Thr Met Lys
312 1                               5                               10                               15
314 His Leu Leu Leu Leu Leu Cys Val Phe Leu Val Lys Ser Gln Gly
315                               20                               25                               30
317 Val Asn Asp Asn Glu Glu Gly Phe Phe Ser Ala Arg Gly His Arg Pro
318                               35                               40                               45
320 Leu Asp Lys Lys Arg Glu Glu Ala Pro Ser Leu Arg Pro Ala Pro Pro
321 50                               55                               60
323 Pro Ile Ser Gly Gly Gly Tyr Arg Ala Arg Pro Ala Lys Ala Ala Ala
324 65                               70                               75                               80
326 Thr Gln Lys Lys Val Glu Arg Lys Ala Pro Asp Ala Gly Gly Cys Leu
327                               85                               90                               95
329 His Ala Asp Pro Asp Leu Gly Val Leu Cys Pro Thr Gly Cys Gln Leu
330                               100                              105                              110
332 Gln Glu Ala Leu Leu Gln Gln Glu Arg Pro Ile Arg Asn Ser Val Asp
333                               115                              120                              125
335 Glu Leu Asn Asn Asn Val Glu Ala Val Ser Gln Thr Ser Ser Ser Ser
336 130                              135                              140
338 Phe Gln Tyr Met Tyr Leu Leu Lys Asp Leu Trp Gln Lys Arg Gln Lys
339 145                              150                              155                              160
341 Gln Val Lys Asp Asn Glu Asn Val Val Asn Glu Tyr Ser Ser Glu Leu
342                               165                               170                               175
344 Glu Lys His Gln Leu Tyr Ile Asp Glu Thr Val Asn Ser Asn Ile Pro
345                               180                               185                               190
347 Thr Asn Leu Arg Val Leu Arg Ser Ile Leu Glu Asn Leu Arg Ser Lys
348 195                               200                               205
350 Ile Gln Lys Leu Glu Ser Asp Val Ser Ala Gln Met Glu Tyr Cys Arg
351 210                               215                               220
353 Thr Pro Cys Thr Val Ser Cys Asn Ile Pro Val Val Ser Gly Lys Glu
354 225                               230                               235                               240
356 Cys Glu Glu Ile Ile Arg Lys Gly Gly Glu Thr Ser Glu Met Tyr Leu

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/553,904

DATE: 03/08/2007

TIME: 12:25:23

Input Set : A:\53694131.APP

Output Set: N:\CRF4\03082007\J553904.raw